A KEY TO THE NEW WORLD GENERA OF THE BEETLE FAMILY LIMNICHIDAE[1]

David P. Wooldridge[2]

ABSTRACT: Fifteen genera of Limnichidae are known from the new world. All recent keys to the North American representatives of the family omit many valid genera, and no key has previously been presented which will separate those genera that are restricted to Central and South America. The key presented here will separate all new world genera known to date.

DESCRIPTORS: Coleoptera, Limnichidae, genera of Limnichidae, Key, New world.

Three subfamilies and fifteen genera of Limnichidae have been described from the Western Hemisphere, including two subfamilies and seven genera which occur in the United States. To my knowledge, however, there is no key suitable for separating these genera. The small size (0.5 - 4.5 mm) and relative scarcity of most species has tended to cause them to be neglected.

The U.S. genera and species, with the exception of *Lutrochus* and *Throscinus* which were at that time placed in other families, were treated by Casey (1912). Casey established five new genera which more recent keys [eg. Arnett, (1963), Leech and Chandler, (1963), and Hatch (1965)] have largely ignored. This situation is entirely unsatisfactory in that many diverse groups are included under the name *Limnichus*, a primarily old world genus. In any case, the value of all these keys is limited if the specimen under study is from outside the region covered in the particular work. Generic placement of a specimen from any point south of the U.S. has required considerable study for anyone not familiar with the family. The following key has been designed with the hope that generic identifications will be made somewhat easier.

Of the 15 genera included in the key, I have seen specimens of all but *Phalacrichus* and *Cephalobyrrinus*. In the key the characters used to separate these two genera are based on the original descriptions. *Lutrochus* and *Ersachus*, often placed respectively

[1]Accepted for publication: June 12, 1974

[2]Department of Biology, The Pennsylvania State University, Ogontz Campus, Abington, Pennsylvania 19001.

with the Dryopidae and Elmidae were included with the Limnichidae by Hinton (1939). The genus *Cyphonichus* Sharp (1902) has been reduced to a synonym of *Byrrhinus* (cf. Arrow, 1909) and I have not attempted to resurrect it. Those species described as *Cyphonichus* that I have seen certainly belong in *Byrrhinus,* but I have not yet seen all of Sharp's species, and the original description of the genus was somewhat vague.

An indication as to approximate numbers of species and the distribution of each genus is included in the key. Where no distributions are mentioned, the genus is found throughout all or most of North and South America.

Key to the Genera of New World Limnichidae

1. Eyes separated on vertex by less than diameter of one eye, often nearly contiguous; tarsal formula 4-5-5. Subfamily Thaumastodinae (1 sp., Panama; 1 sp. Cuba) . . . . . *Martinius* Spilman 1959

   Eyes separated on vertex by more than diameter of eye; tarsal formula 5-5-5 2

2(1). Body elongate; eyes large and dorsally prominent, venter not grooved for reception of legs. Subfamily Cephalobyrrhinae 3

   Body oval; eyes usually small and not prominent; venter grooved for reception of legs. Subfamily Limnichinae 4

3(2). Elytra with a sutural stria and several short basal striae. (1 sp., Costa Rica) . . . . . *Cephalobyrrhinus* Pic 1923

   Elytra without a trace of striae (3 spp. U.S.; 1 sp., Haiti) . . . . . *Throscinus* LeConte 1874

4(2). Pronotum with a deep excavation on each side of the head to receive antennae. Size about 0.8-1.1 mm (1 sp., U.S.) . . . . . *Physemus* LeConte 1854

   Pronotum not excavated. Size variable, but usually larger 5

5(4). Elytral hairs of two types: dense, short recumbent hairs, and scattered, long, upright hairs 6

   Elytral hairs all alike, either short and recumbent or long and upright 7

6(5). Prosternal process with a median longitudinal sulcus (ca. 20 spp.) . . . . . *Limnichoderus* Casey 1889

Prosternal process without a median longitudinal sulcus (1 sp., Guadeloupe) . . . . . *Limnichus Latreille 1829*

7(5). Elytral hairs short and recumbent, somewhat scale-like 8

Elytral hairs scattered, long, erect, not scale-like 12

8(7). Eyes prominent, visible from above 9

Eyes vertical, flattened, not visible from above 11

9(8). Head, including antennae, capable of being completely retracted into thorax (ca. 12 spp., Canada to Central America . . . . . *Limnichites* Casey 1889

Head not capable of being retracted into thorax 10

10(9). Posterior angles of pronotum extended into acute, elongate projections (4 spp. Central America and Colombia) . . . . . *Ersachus* Erichson 1847

Posterior angles of pronotum normal (ca. 12 spp.) . *Lutrochus* Erichson 1847

11(8). Prosternal process with a median longitudinal sulcus (ca. 20 spp.) . . . . . *Eulimnichus* Casey 1889

Prosternal process without a median longitudinal sulcus (1 sp., Pacific States of U.S.) . . . . . *Lichminus* Casey 1889

12(7). Pronotum with a distinct semicircular series of punctures extending laterally from each side of midpoint, curving toward base 13

Pronotum plain or at most with an indistinct series of punctures 14

13(12). Antennal club 5-segmented (3 spp., Central America) . . . . . *Limnichalia* Casey 1912

Antennal club 3-segmented, terminal segments slender (1 sp., Mexico) . . . . . *Phalacrichus* Sharp 1902

14(12). Second antennal segment short, not much longer than third segment, although much thicker (ca. 11 spp. Central and South America)
. . . . . *Byrrhinus* Motschulsky 1858

Second antennal segment elongate, several times longer than third segment, and curved to fit around eye (2 spp., Guatemala)
. . . . . *Euthryptus* Sharp 1902

Little is known about the habitats and life histories of many of these genera, since many have been collected primarily in light traps. It is hoped that anyone with such information will make it available. In addition, I would welcome the opportunity to examine any specimens anyone might wish to loan.

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